Physica Scripta

Volume 81 Number 2 February 2010

PAPERS

GENERAL PHYSICS

025001 The generalized Uhlenbeck–Goudsmit hypothesis: ‘magnetic’ S° and ‘electric’ Z° spins
Tomislav Ivezić

025002 Darboux transformation and soliton solutions for a system describing ultrashort pulse propagation in a multicomponent nonlinear medium
Rui Guo, Bo Tian, Lei Wang, Feng-Hua Qi and Yan Zhan

025003 Ecological optimization of an irreversible quantum Carnot heat engine with spin-1/2 systems
Xiaowei Liu, Lingen Chen, Feng Wu and Fengrui Sun

025004 The damped Pinney equation and its applications to dissipative quantum mechanics
F Haas

025005 Platonic polyhedra tune the three-sphere: III. Harmonic analysis on octahedral spherical three-manifolds
Peter Kramer

025006 Aitken extrapolation and epsilon algorithm for an accelerated solution of weakly singular nonlinear Volterra integral equations
H Mesgarani, N Aghareldah and P Parmour

025007 Generation of teletraffic of generalized Cauchy type
Ming Li

025008 Extending the class of solvable potentials: III. The hyperbolic single wave
H Bahmanli and A D Alhaidari

025009 Effects of correlated noise in a tumor cell growth model in the presence of immune response
Chunhua Zeng

025010 Tunneling and transmission resonances of a Dirac particle by a double barrier
Victor M Villalba and Luis A Gonzalez-Arraga

025011 Two kinds of multi-order exact solution to the shallow water system
Zuntao Fu, Lina Zhang, Jiangyu Mao and Shikuo Liu

025012 Diabolic points and entanglement
Willi-Hans Steeb

025013 Extending the class of solvable potentials: II. Screened Coulomb potential with a barrier
A D Alhaidari

NUCLEAR PHYSICS

025201 Particle–rotor model interpretation of nuclear states in 127I
Sadek Zeghib

025301 Scaling laws for large magneto-optical traps
G L Gatobigio, T Pohl, G Labeyrie and R Kaiser

PHYSICS OF GASES, PLASMAS AND ELECTRIC DISCHARGES

025501 Effect of ion temperature on localized ion-acoustic waves with flat-topped electron distribution
H Alinejad and S Sobhanian

025502 Plasma effects in a travelling wave tube
Manish Kumar, Lalita Bhasin and V K Tripathi

(Continued on inside back cover)

Bibliographic codes CODEN: PHSTBO 81 (2) 025001–025902 (2010) ISSN: 0031-8949